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## Datasheet for ABIN4713554 Human TXNRD2 cDNA Clone in Bacterial Expression Vector (His-MBP)

#### Overview

| Quantity:    | 500 ng                      |
|--------------|-----------------------------|
| Quantity.    | 500 hg                      |
| Gene:        | TXNRD2                      |
| Species:     | Human                       |
| Fusion tag:  | His-MBP                     |
| Insert:      | cDNA                        |
| Vector:      | Bacterial Expression Vector |
| Application: | Cloning (Clon)              |

#### Product Details

| Purpose:              | Bacterial expression of Human TXNRD2 with His-MBP                                                                                                        |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Insert Length:        | 1287 bp                                                                                                                                                  |
| Vector Backbone:      | pPB-His-MBP                                                                                                                                              |
| Promoter:             | T7 Promoter                                                                                                                                              |
| Bacterial Resistance: | Kanamycin                                                                                                                                                |
| Expression Type:      | Transient                                                                                                                                                |
| Specificity:          | 5-Nhel and 3-Xhol<br>Fusion tag: Dual N-terminal tag, 6X Histidine followed by Maltose Binding Protein which is<br>cleavable with Thrombin (Size 43 kDa) |
| Sequencing Primer:    | MBP Forward primer: 5'-CGCAGATGTCCGCTTTCTGG-3', T7 terminator primer: 5'-<br>GCTAGTTATTGCTCAGCGG-3'                                                      |

#### Target Details

Gene:

TXNRD2

Alternative Name:

TXNRD2 (TXNRD2 Products)

### Application Details

| Application Notes: | The pPB vectors are low-medium copy number vectors in which the gene expression is driven          |
|--------------------|----------------------------------------------------------------------------------------------------|
|                    | by the strong T7 promoter.                                                                         |
|                    | Below are some basic guidelines for using the pPB vectors for protein production:                  |
|                    | 1. The pPB vectors are designed to be used with E. coli strains that are DE3 lysogens i.e. the     |
|                    | host E. coli cell has a source of T7 RNA polymerase.                                               |
|                    | 2. Recombinant protein induction is usually done at OD600 of 0.6-1.2 using Isopropyl $\beta$ -D-1- |
|                    | thiogalactopyranoside (IPTG) at a final concentration of 0.05 -1mM.                                |
|                    | 3. The ideal concentration of IPTG must be determined empirically for each recombinant             |
|                    | protein/cell-line. Similarly, the length of time and temperature for induction provide other       |
|                    | variables that need to be optimized on a case-to-case basis.                                       |
|                    | 4. For toxic proteins, it is recommended to go for shorter induction time and also to try and      |
|                    | suppress basal recombinant gene expression through (a) addition of glucose or use of pLysS         |
|                    | plasmid. Please note that special cell-lines are also available in the market that cater to        |
|                    | expression of toxic proteins.                                                                      |
|                    | 5. Once grown for the desired length of time, harvest cells by centrifugation and either freeze    |
|                    | the cells at -80°C (as such or after re-suspending in the desired buffer) or proceed with the      |
|                    | purification.                                                                                      |
| Restrictions:      | For Research Use only                                                                              |

## Handling

| Format:           | Liquid                                                                                                    |
|-------------------|-----------------------------------------------------------------------------------------------------------|
| Buffer:           | 10 mM Tris-HCl, 1 mM EDTA, pH 8.0                                                                         |
| Storage:          | -20 °C                                                                                                    |
| Storage Comment:  | 1 year when stored at -20° C or lower in a non-frost free freezer.                                        |
| Expiry Date:      | 12 months                                                                                                 |
| Publications      |                                                                                                           |
| Product cited in: | Johnson, Drugan, Miller, Evans: "38" in: , Vol. 1363, Issue Nucleic acids research, pp. 28-39, (<br>1991) |